



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/607,584	06/27/2003	Yu Liu	03501.141	5810

59866 7590 03/06/2007
EDELL, SHAPIRO & FINNAN, LLC
1901 RESEARCH BLVD.
SUITE 400
ROCKVILLE, MD 20850-3164

EXAMINER

VATHYAM, SUREKHA

ART UNIT	PAPER NUMBER
----------	--------------

1753

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/06/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/607,584	Applicant(s) LIU ET AL.	
	Examiner Surekha Vathyam	Art Unit 1753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 January 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-19 and 21-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-19 and 21-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>01/30/07</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3 – 9, 11 – 13, 16 – 19, 21 – 27, 29 – 31 and 34 – 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Guttman et al. (US 5,370,777).

Regarding claim 1, Guttman ('777) discloses an aqueous gel medium (column 6, lines 44 – 51) for facilitating the electrophoretic separation of analytes present in a sample (column 5, line 36 – 40), said medium comprising: a non-crosslinked (column 9, lines 22 – 37) hydrophilic polymer (column 8, lines 45 – 54); tris(hydroxymethyl)aminomethane – borate buffer (column 5, lines 63 – 67); sodium dodecyl sulfate (column 9, lines 53 – 55); and an organic additive (column 9, lines 38 – 45); said gel medium additionally contains one or more reagent(s) that function to help keep protein analytes in a reduced form (column 18, lines 22 – 42 and column 19, lines 4 – 8); and said aqueous gel medium facilitates the electrophoretic separation of said analytes by comprising a molecular sieve (column 9, lines 14 – 21).

Guttman ('777) further discloses that the pH of the tris(hydroxymethyl)aminomethane – borate buffer is "preferably between about 8.0 and about 8.5, and most preferably about 8.3" (column 13, lines 12 – 16). Guttman ('777) also discloses the pH of the buffer should be in the alkaline range for anionic surfactants

Art Unit: 1753

such as sodium dodecyl sulfate (SDS), i.e., between about 8.0 and 10.0 (column 13, lines 6 – 11) and with respect to SDS surfactant, a most preferred pH is about 8.8 (column 13, lines 11 – 12). The difference between instant claim 1 and Guttman ('777) is that claim 1 requires a pH above 8.0 and below 8.3, while Guttman ('777) does not disclose a specific point within this range but instead discloses ranges encompassing the claimed range such as about 8.0 to about 8.5 (column 13, lines 12 – 16) and between about 8.0 and 10.0 (column 13, lines 6 – 11) as well as the overlapping range “about 8.3”. In the case where the claimed ranges “overlap or lie inside ranges disclosed by the prior art” a *prima facie* case of obviousness exists. *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976). “[A] prior art reference that discloses a range encompassing a somewhat narrower claimed range is sufficient to establish a *prima facie* case of obviousness.” *In re Peterson*, 315 F.3d 1325, 1330, 65 USPQ2d 1379, 1382-83 (Fed. Cir. 2003). The term “most preferred pH” with regards to the SDS surfactant (column 13, lines 11 – 12), is not a limiting term. Guttman ('777) discloses a pH range between “about 8.0 and 10.0” for anionic surfactants (column 13, lines 6 – 11). It would have been obvious to one of ordinary skill in the art to have clearly understood that there could be other pH values in the range. “[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation.” *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

Guttman ('777) discloses reagents such as DTT, 2-mercaptoethanol (column 18, lines 22 – 42) and EDTA (column 19, lines 4 – 5) that help keep protein analytes in a

Art Unit: 1753

reduced form, introduced into the gel medium (column 18, lines 39 – 42 and column 19, lines 5 – 8). These reagents by virtue of being very small molecules, will diffuse into the gel. Additionally, EDTA, being a charged molecule will easily migrate through the gel.

Regarding claim 3, Guttman ('777) discloses the aqueous gel medium wherein said one or more reagent(s) include a reducing reagent (column 18, lines 22 – 42).

Regarding claim 4, Guttman ('777) discloses the aqueous gel medium wherein said reducing reagent is selected from the group consisting of 2-mercaptoethanol, dithiothreitol (DTT), dithioerythritol (DTE), and tris(2-carboxyethyl)phosphine (column 18, lines 22 – 42).

Regarding claim 5, Guttman ('777) discloses the aqueous gel medium wherein said reducing reagent is dithiothreitol (DTT) (column 18, lines 22 – 42).

Regarding claim 6, Guttman ('777) discloses the aqueous gel medium wherein said one or more reagent(s) include a metal ion chelator (column 19, lines 4 – 5).

Regarding claim 7, Guttman ('777) discloses the aqueous gel medium wherein said reducing reagent is ethylenediaminetetraacetic acid (EDTA) (column 19, lines 4 – 8).

Regarding claim 8, Guttman ('777) discloses the aqueous gel medium wherein said non-crosslinked hydrophilic polymer is selected from the group consisting of: dextran, polyacrylamide, cellulose derivatives and polyethylene oxide (column 8, lines 50 – 54).

Art Unit: 1753

Regarding claim 9, Guttman ('777) discloses the aqueous gel medium wherein said non-crosslinked hydrophilic polymer is dextran (column 8, lines 50 – 54).

Regarding claim 11, Guttman ('777) discloses the aqueous gel medium wherein said organic additive is an alcohol (column 9, lines 38 – 45).

Regarding claim 12, Guttman ('777) discloses the aqueous gel medium wherein said alcohol is present at a concentration of from about 0.1% to about 30% (V/V) (column 9, lines 23 – 30).

Regarding claim 13, Guttman ('777) discloses the aqueous gel medium wherein said alcohol is selected from the group consisting of: methanol, ethanol, ethylene glycol and glycerol (column 9, lines 38 – 45).

Regarding claim 16, Guttman ('777) discloses the aqueous gel medium wherein said Tris-borate buffer is present at a concentration of from about 0.1 M to about 1.0M (column 10, lines 51 – 54).

Regarding claim 17, Guttman ('777) discloses the aqueous gel medium wherein the pH is "preferably between about 8.0 and about 8.5, and most preferably about 8.3" (column 13, lines 12 – 16). Guttman ('777) also discloses the pH of the buffer should be in the alkaline range for anionic surfactants such as sodium dodecyl sulfate (SDS), i.e., between about 8.0 and 10.0 (column 13, lines 6 – 11). The difference between instant claim 17 and Guttman ('777) is that claim 17 requires a pH of 8.1 ± 0.1 , while Guttman ('777) does not disclose a specific point within this range but instead discloses ranges encompassing the claimed range such as about 8.0 to about 8.5 (column 13, lines 12 – 16) and between about 8.0 and 10.0 (column 13, lines 6 – 11). In the case where the

Art Unit: 1753

claimed ranges "overlap or lie inside ranges disclosed by the prior art" a *prima facie* case of obviousness exists. *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976).

"[A] prior art reference that discloses a range encompassing a somewhat narrower claimed range is sufficient to establish a *prima facie* case of obviousness." *In re Peterson*, 315 F.3d 1325, 1330, 65 USPQ2d 1379, 1382-83 (Fed. Cir. 2003).

Regarding claim 18, Guttman ('777) discloses the aqueous gel medium wherein said analytes include analytes selected from the group consisting of: proteins, polypeptides, peptides and nucleic acid molecules (column 10, lines 1 – 20).

Regarding claim 19, Guttman ('777) discloses a capillary electrophoresis system (column 6, lines 44 – 51) comprising a capillary tube (column 6, lines 52 – 57) containing an aqueous gel medium (column 6, lines 44 – 51), said medium comprising: a non-crosslinked (column 9, lines 22 – 37) hydrophilic polymer (column 8, lines 45 – 54); tris(hydroxymethyl)aminomethane – borate buffer (column 5, lines 63 – 67); sodium dodecyl sulfate (column 9, lines 53 – 55); and an organic additive (column 9, lines 38 – 45); said gel medium additionally contains one or more reagent(s) that function to help keep protein analytes in a reduced form (column 18, lines 22 – 42 and column 19, lines 4 – 8) and said aqueous gel medium facilitates the electrophoretic separation of said analytes (column 5, line 36 – 40) by comprising a molecular sieve (column 9, lines 14 – 21).

Guttman ('777) further discloses that the pH of the tris(hydroxymethyl)aminomethane – borate buffer is "preferably between about 8.0 and

Art Unit: 1753

about 8.5, and most preferably about 8.3" (column 13, lines 12 – 16). Guttman ('777) also discloses the pH of the buffer should be in the alkaline range for anionic surfactants such as sodium dodecyl sulfate (SDS), i.e., between about 8.0 and 10.0 (column 13, lines 6 – 11) and with respect to SDS surfactant, a most preferred pH is about 8.8 (column 13, lines 11 – 12). The difference between instant claim 1 and Guttman ('777) is that claim 1 requires a pH above 8.0 and below 8.3, while Guttman ('777) does not disclose a specific point within this range but instead discloses ranges encompassing the claimed range such as about 8.0 to about 8.5 (column 13, lines 12 – 16) and between about 8.0 and 10.0 (column 13, lines 6 – 11) as well as the overlapping range "about 8.3". In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a *prima facie* case of obviousness exists. *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976). "[A] prior art reference that discloses a range encompassing a somewhat narrower claimed range is sufficient to establish a *prima facie* case of obviousness." *In re Peterson*, 315 F.3d 1325, 1330, 65 USPQ2d 1379, 1382-83 (Fed. Cir. 2003). The term "most preferred pH" with regards to the SDS surfactant (column 13, lines 11 – 12), is not a limiting term. Guttman ('777) discloses a pH range between "about 8.0 and 10.0" for anionic surfactants (column 13, lines 6 – 11). It would have been obvious to one of ordinary skill in the art to have clearly understood that there could be other pH values in the range. "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

Art Unit: 1753

Guttman ('777) discloses reagents such as DTT, 2-mercaptoethanol (column 18, lines 22 – 42) and EDTA (column 19, lines 4 – 5) that help keep protein analytes in a reduced form, introduced into the gel medium (column 18, lines 39 – 42 and column 19, lines 5 – 8). These reagents by virtue of being very small molecules, will diffuse into the gel. Additionally, EDTA, being a charged molecule will easily migrate through the gel.

Regarding claim 21, Guttman ('777) discloses the capillary electrophoresis system wherein said one or more reagent(s) include a reducing reagent (column 18, lines 22 – 42 and column 19, lines 4 – 5).

Regarding claim 22, Guttman ('777) discloses the capillary electrophoresis system wherein said reducing reagent is selected from the group consisting of 2-mercaptoethanol, dithiothreitol (DTT), dithioerythreitol (DTE), and tris(2-carboxyethyl)phosphine (column 18, lines 22 – 42).

Regarding claim 23, Guttman ('777) discloses the capillary electrophoresis system wherein said reducing reagent is dithiothreitol (DTT) (column 18, lines 22 – 42).

Regarding claim 24, Guttman ('777) discloses the capillary electrophoresis system wherein said one or more reagent(s) include a metal ion chelator (column 19, lines 4 – 5).

Regarding claim 25, Guttman ('777) discloses the capillary electrophoresis system wherein said reducing reagent is ethylenediaminetetraacetic acid (EDTA) (column 19, lines 4 – 8).

Art Unit: 1753

Regarding claim 26, Guttman ('777) discloses the capillary electrophoresis system wherein said non-crosslinked hydrophilic polymer is selected from the group consisting of: dextran, polyacrylamide, cellulose derivatives and polyethylene oxide (column 8, lines 50 – 54).

Regarding claim 27, Guttman ('777) discloses the capillary electrophoresis system wherein said non-crosslinked hydrophilic polymer is dextran (column 8, lines 50 – 54).

Regarding claim 29, Guttman ('777) discloses the capillary electrophoresis system wherein said organic additive is an alcohol (column 9, lines 38 – 45).

Regarding claim 30, Guttman ('777) discloses the capillary electrophoresis system wherein said alcohol is present at a concentration of from about 0.1% to about 30% (V/V) (column 9, lines 23 – 30).

Regarding claim 31, Guttman ('777) discloses the capillary electrophoresis system wherein said alcohol is selected from the group consisting of: methanol, ethanol, ethylene glycol and glycerol (column 9, lines 38 – 45).

Regarding claim 34, Guttman ('777) discloses the capillary electrophoresis system wherein said Tris-borate buffer is present at a concentration of from about 0.1 M to about 1.0M (column 10, lines 51 – 54).

Regarding claim 35, Guttman ('777) discloses the capillary electrophoresis system wherein the pH is “preferably between about 8.0 and about 8.5, and most preferably about 8.3” (column 13, lines 12 – 16). Guttman ('777) also discloses the pH of the buffer should be in the alkaline range for anionic surfactants such as sodium

Art Unit: 1753

evidence that commercially available dextran possesses a non-cross-linked structure composed of approximately 95% alpha-D-(1-6) linkages (column 1, lines 41 – 43).

Guttman ('777) discloses the molecular weight of dextran but not its composition.

Therefore, it would have been obvious to one of ordinary skill in the art to have looked at a commercial product for this information.

Guttman ('777) discloses the capillary electrophoresis system as discussed with regards to claim 27 above.

Regarding claim 28, Guttman ('777) discloses the capillary electrophoresis system wherein said dextran has a molecular weight of 2,000 kilodaltons (column 5, lines 63 – 67) but does not explicitly disclose the linkages therein. The King ('661) reference is cited as evidence that commercially available dextran possesses a non-cross-linked structure composed of approximately 95% alpha-D-(1-6) linkages (column 1, lines 41 – 43). Guttman ('777) discloses the molecular weight of dextran but not its composition. Therefore, it would have been obvious to one of ordinary skill in the art to have looked at a commercial product for this information.

4. Claims 14 – 15 and 32 – 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Guttman et al. (US 5,370,777) in view of Guttman (US 5,213,669).

Guttman ('777) discloses the aqueous gel medium as discussed with regards to claim 13 above.

Art Unit: 1753

dodecyl sulfate (SDS), i.e., between about 8.0 and 10.0 (column 13, lines 6 – 11). The difference between instant claim 17 and Guttman ('777) is that claim 17 requires a pH of 8.1 ± 0.1 , while Guttman ('777) does not disclose a specific point within this range but instead discloses ranges encompassing the claimed range such as about 8.0 to about 8.5 (column 13, lines 12 – 16) and between about 8.0 and 10.0 (column 13, lines 6 – 11). In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a *prima facie* case of obviousness exists. *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976). "[A] prior art reference that discloses a range encompassing a somewhat narrower claimed range is sufficient to establish a *prima facie* case of obviousness." *In re Peterson*, 315 F.3d 1325, 1330, 65 USPQ2d 1379, 1382-83 (Fed. Cir. 2003).

Regarding claim 36, Guttman ('777) discloses the capillary electrophoresis system wherein said analytes include analytes selected from the group consisting of: proteins, polypeptides, peptides, polysaccharides, and nucleic acid molecules (column 10, lines 1 – 20).

3. Claims 10 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Guttman et al. (US 5,370,777) in view of King (US 3,622,661).

Guttman ('777) discloses the aqueous gel medium as discussed with regards to claim 9 above.

Regarding claim 10, Guttman ('777) discloses the aqueous gel medium wherein said dextran has a molecular weight of 2,000 kilodaltons (column 5, lines 63 – 67) but does not explicitly disclose the linkages therein. The King ('661) reference is cited as

Art Unit: 1753

Regarding claim 14, Guttman ('777) does not explicitly disclose the alcohol is glycerol.

Guttman ('669) teaches an aqueous gel medium wherein the alcohol is glycerol (column 5, lines 7 – 8).

It would have been obvious to one of ordinary skill in the art to have modified the aqueous gel medium of Guttman ('777) to include glycerol as taught by Guttman ('669) because as explained by Guttman ('669), the "polyol" (glycerol and ethylene glycol being representative examples), help to coat the inner walls of capillaries that they occupy (column 5, lines 3 – 7).

Regarding claim 15, Guttman ('669) teaches an aqueous gel medium wherein glycerol is present at a concentration of from about 0.1% to about 30% (V/V) (column 4, line 67 – column 5, line 3).

Guttman ('777) discloses the capillary electrophoresis system as discussed with regards to claim 31 above.

Regarding claim 32, Guttman ('777) does not explicitly disclose the alcohol is glycerol.

Guttman ('669) teaches a capillary electrophoresis system wherein the alcohol is glycerol (column 5, lines 7 – 8).

It would have been obvious to one of ordinary skill in the art to have modified the capillary electrophoresis system of Guttman ('777) to include glycerol as taught by Guttman ('669) because as explained by Guttman ('669), the "polyol" (glycerol and

Art Unit: 1753

ethylene glycol being representative examples), help to coat the inner walls of capillaries that they occupy (column 5, lines 3 – 7).

Response to Arguments

Applicant's arguments filed January 30, 2007 have been fully considered but they are not persuasive. Applicants argue that Guttman ('777) does not teach or suggest, "employing the pH range of 8.0 – 8.3 claimed by the applicants". Guttman ('777) discloses that the pH of the tris(hydroxymethyl)aminomethane – borate buffer is "preferably between about 8.0 and about 8.5, and most preferably about 8.3" (column 13, lines 12 – 16). Guttman ('777) also discloses the pH of the buffer should be in the alkaline range for anionic surfactants such as sodium dodecyl sulfate (SDS), i.e., between about 8.0 and 10.0 (column 13, lines 6 – 11) and with respect to SDS surfactant, a most preferred pH is about 8.8 (column 13, lines 11 – 12). The difference between instant claim 1 and Guttman ('777) is that claim 1 requires a pH above 8.0 and below 8.3, while Guttman ('777) does not disclose a specific point within this range but instead discloses ranges encompassing the claimed range such as about 8.0 to about 8.5 (column 13, lines 12 – 16) and between about 8.0 and 10.0 (column 13, lines 6 – 11) as well as the overlapping range "about 8.3". In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a *prima facie* case of obviousness exists. *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976). "[A] prior art reference that discloses a range encompassing a somewhat narrower claimed range is sufficient to establish a prima facie case of obviousness." *In re Peterson*, 315

Art Unit: 1753

F.3d 1325, 1330, 65 USPQ2d 1379, 1382-83 (Fed. Cir. 2003). The term “most preferred pH” with regards to the SDS surfactant (column 13, lines 11 – 12), is not a limiting term. Guttman ('777) discloses a pH range between “about 8.0 and 10.0” for anionic surfactants (column 13, lines 6 – 11). It would have been obvious to one of ordinary skill in the art to have clearly understood that there could be other pH values in the range. “[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation.” *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

Applicants further argue that Guttman ('777) does not teach “the inclusion of reagents that function to help keep protein analytes in a reduced form in the aqueous gel medium”. Guttman ('777) discloses reagents such as DTT, 2-mercaptoethanol (column 18, lines 22 – 42) and EDTA (column 19, lines 4 – 5) that help keep protein analytes in a reduced form, introduced into the gel medium (column 18, lines 39 – 42 and column 19, lines 5 – 8). These reagents by virtue of being very small molecules, will diffuse into the gel. Additionally, EDTA, being a charged molecule will easily migrate through the gel. Alternatively, the reducing agent will break the disulfide bonds in protein analytes and the resultant product with sulfhydryl groups (-SH) are reducing agents.

Applicants argue regarding claims 10 and 28 that neither King ('661) nor Guttman ('777) individually disclosed all the limitations of the claims; however, the issue is what their combined teachings would have suggested to one of ordinary skill in the art. King ('661) makes clear that the 95% alpha-D-(1-6) linkages are conventional.

Art Unit: 1753

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Surekha Vathyam whose telephone number is 571-272-2682. The examiner can normally be reached on 7:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam X. Nguyen can be reached on 571-272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1753

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SV
March 1, 2007



NAM NGUYEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700